ABSTRACT

A method is provided for reducing crosstalk from four-wave mixing in optical networks. Return-to-zero optical pulses are stretched in time using a pulse stretcher and launched into a transmission fiber. The transmitted signal is recompressed using a pulse compressor prior to detection and electrical filtering. The resulting reduction in peak power of the transmitted pulses and the spectral broadening of the four-wave mixing products limits the crosstalk due to four-wave mixing and enhances the system performance.